



60TH ANNUAL MICROWAVE POWER SYMPOSIUM

The Premier Industry-Wide Microwave Power Event

June 16-18, 2026

The Westin New Orleans Hotel
New Orleans, Louisiana, USA

Register today at www.IMPI.org



Presented by the
INTERNATIONAL MICROWAVE POWER INSTITUTE

PO Box 1140, Mechanicsville, VA 23111

E-mail: info@impi.org

WWW.IMPI.ORG



60TH ANNUAL MICROWAVE POWER SYMPOSIUM

Hosted by the International Microwave Power Institute

IMPI 60 is your opportunity to connect to and learn from the premier microwave power experts from around the world!

THE SYMPOSIUM

The program offers topics for everyone interested in learning about the latest developments in microwave power science and technology. This in-person multi-day event will bring together researchers, technologists and engineers from across the globe, to network and learn. We will share the latest findings on microwave and radio frequency power systems for non-communication applications, including sustainability, solid state, industrial, plasma, modeling, chemical and material processing, food technologies, biological applications and more!

HOST CITY, VENUE AND ACCOMMODATIONS

Situated on Canal Street and soaring above the Mississippi River, the Westin New Orleans is just steps from the famous French Quarter in New Orleans. Located twelve (12) miles from the Louis Armstrong International Airport, IMPI 60 attendees will enjoy all this venue has to offer. The Westin New Orleans hotel is perched atop The Shops at Canal Place and only steps away from the boutique shops at Royal Street and eateries at Bourbon Street. The hotel features an in-house restaurant and lobby bar with stunning views, a fully equipped WestinWORKOUT® Fitness Studio offering yoga classes and Pelotons®, and 24-hour room service. The last time an IMPI Symposia took place in New Orleans was 2014 (48th IMPI Symposium).

IMPI is pleased to offer sleeping rooms at the Westin New Orleans for the special group rate of \$219USD per night, plus applicable taxes, on a first-come, first-served basis. Book your room here: [IMPI 60 Westin Group Weblink for Reservations](#)

SPECIAL EVENTS

There are several optional special events that registrants can add on during the registration process:

- **Short Course I: Microwave & RF Safety Class** [View Details](#)
- **Short Course II: Microwave Processing for the Future of Food: Science, Industry & Innovation** [View Details](#)
- **Solid State RF Energy Section Networking Luncheon**
- **Group Dinner at Local Restaurant**

Spouse/Guests may sign up for the Welcome Reception and/or Group Dinner



Exact times/days of presentations are subject to change

TUESDAY, JUNE 16, 2026

8:00am - 12:00pm

SHORT COURSE I: MICROWAVE & RF SAFETY CLASS

(Optional – Additional Fee Applies)

Instructors: Scott Best, SiberSci LLC

12:15pm - 1:30pm

SOLID STATE RF ENERGY HOSTED LUNCHEON

Section Updates, Market Survey Recap, Roadmap & Lunch

(Open to all IMPI 60 Attendees - Optional – Additional Fee Applies)

1:30pm - 4:45pm

SHORT COURSE II: MICROWAVE PROCESSING FOR THE FUTURE OF FOOD: SCIENCE, INDUSTRY & INNOVATION *(Optional – Additional Fee Applies)*

Instructors: Sean McKeown, Graphic Packaging International, Ulrich Erle, IMPI Board,
Melissa Bryan, Conagra Brands, and Marie Jirsa, IMPI Board

4:45pm - 6:00pm

WELCOME RECEPTION & EXHIBITOR SHOWCASE

Posters and Exhibits Open

- Muegge GmbH (Germany)
- Microwave Techniques (USA)
- S-Team (Slovak Republic)
- Richardson Electronics (USA)
- MKS (Italy)
- pinkRF (Netherlands)
- SAIREM (France)
- Kanematsu USA
- IEEE's MTT-S
- Stellant Systems (USA)
- WavePIA (Republic of Korea)
- Ampleon (USA)
- Rivendell Technologies (USA)
- Crescend Technologies (USA)
- Solid State RF Energy Section

6:00pm

DINNER ON OWN

There are dozens of restaurants in walking distance of the Westin New Orleans



WEDNESDAY, JUNE 17

8:00am - 8:15am

WELCOME & INTRODUCTIONS

Jiajia Chen, University of Tennessee, Knoxville

Pablo Santon, pinkRF, Netherlands

John F. Mastela, JFM Technical Corporation & President, IMPI

8:15am - 9:05am

KEYNOTE ADDRESS: Microwave Power Transfer for a Sustainable Future

Naoki Shinohara

Kyoto University, Japan

9:05am - 9:10am

FIVE MINUTE BREAK TO MOVE BETWEEN CONCURRENT SESSIONS

9:10am - 10:00am

CONCURRENT SESSIONS

SESSION A: PLASMA

Operational Characteristics of a High-Power Plasma Limiter – Measurements and Modeling

Camille E. Williams^{1,2}, Sandeep Narasapura Ramesh^{3,4}, Adyson M. Koetter¹,
Abbas Semnani³, and Vadim V. Yakovlev¹

¹Center for Industrial Mathematics and Statistics, Department of Mathematical
Sciences, Worcester Polytechnic Institute, Worcester, MA, USA

²Department of Electrical, Computer, and Energy Engineering,
University of Colorado at Boulder, Boulder, CO, USA

³Department of Electrical Engineering and Computer Science,
The University of Toledo, Toledo, OH, USA

⁴GonioTech, Columbus, OH, USA

Solid-State vs Magnetron-Based MW Generator: Comparison of Plasma Properties

Timo Richter¹, Amandine Guissart¹, Hueseyin Ates² and Jürgen Uebbing¹

¹MUEGGE GmbH, Reichelsheim, Germany

²MUEGGE Gerling, Modesto, USA

SESSION B: DIELECTRIC PROPERTIES

Rapid and Nondestructive Detection of Woody Breast Condition in Chicken Meat from Dielectric Properties Measurement

Samir Trabelsi and Brian Bowker

US National Poultry Research Center, USDA-ARS, Athens, Georgia, USA



Microwave Dielectric Properties of Iron and Zinc-Bearing Fine Solid by Products Materials Generated from Iron and Steelmaking Industries

Mamdouh Omran¹, Hao Yao¹, Danuka Maduranga¹, Chris Pickles², Ron Hutcheon³ and Timo Fabritius¹

¹Process Metallurgy Research Group, University of Oulu, Finland

²Robert M. Buchan Department of Mining, Queen's University, Kingston, ON, Canada

³Microwave Properties North (www.MicrowavePropertiesNorth.ca), Deep River, ON, Canada

10:00am - 10:20am

COFFEE BREAK

10:20am - 11:35am

CONCURRENT SESSIONS

SESSION A: FOOD TECHNOLOGIES I

Exploring an Integrated Steam-Microwave-Vacuum Processing Approach for Development of Shelf-Stable Ready-to-Cook Vegan Patties

Piyush Sharma, Parag Prakash Sutar, Arun Prasath Venugopal

Department of Food Process Engineering, National Institute of Technology Rourkela, Odisha, India

Process Optimization of Microwave Freeze-Dried Tumeric and RF-Dried Tumeric Parboiled Rice

Su-Der Chen¹, Yu-Ling Jiang¹ and Tsung-Lin Cheng²

¹Department of Food Science, ²EMA Program in College of Bioresources, National Ilan University, Yilin City, Taiwan

Optimization of Black Soldier Fly Larvae Drying Process using Microwave and Hot Air Systems

YoonKi Hong and Ben Ballart

Sairem Corporation, Peachtree Corners, United States

SESSION B: MODELING

Numerical Modeling of Microwave-Assisted Depolymerization of Kraft Lignin Using Hydroxylated Copper Oxide/Silica Nano-Catalyst

Adejoke D. Adewumi¹, Marwan Rezk², Dorin Boldor¹

¹LSU AG Center, Baton Rouge, USA

²Louisiana State University, Baton Rouge, USA

Modeling the Microwave Heating of Food with a Rotating and a Revolving Turntable

Noah Anderson and Jiajia Chen

University of Tennessee, Knoxville, TN, USA



WEDNESDAY, JUNE 17, 2026 CONTINUED

Two-Way Coupled CFD/DEM Simulation of Electromagnetic Heating in a Fluidized Bed Reactor

Hossain Aziz^{1,2}; Yupeng Xu^{1,2}; Rahul Koneru^{3,4}; E. David Hucakby³; Pranjali Muley^{1,2} and Mehrdad Shahnam¹

¹National Energy Technology Laboratory, Morgantown, WV USA

²NETL Support Contractor, Morgantown, WV, USA

³National Energy Technology Laboratory, Pittsburgh, PA, USA

⁴NETL Support Contractor, Pittsburgh, PA, USA

11:35am - 12:25pm

POSTER & EXHIBITOR SESSION

12:25pm - 1:00pm

NETWORKING LUNCHEON (Posters & Exhibits Open)

1:00pm - 1:35pm

INVITED: Enhancing Heating Uniformity and Energy Coupling in 915 MHz Microwave-Assisted Pasteurization System (MAPS) using Solid-State Generators

Xu Zhou^{1,2}, Zhongwei Tang³ and Juming Tang²

¹Pennsylvania State University, University Park, USA

²University of Washington, Seattle, USA

³Washington State University, Pullman, USA

1:35pm - 2:25pm

CONCURRENT SESSIONS

SESSION A: SOLID STATE TECHNOLOGIES

Effects of Dielectric Properties Change on the Dynamic Complementary Frequency-Shifting for Extended Heating in a Solid-State Microwave System

Amit Kumar, Arjun Ghimire and Jiajia Chen

University of Tennessee, Knoxville, TN, USA

Solid State RF Energy Generators and systems: "Efficiency" Demystified

Klaus Werner

pinkRF B.V., The Netherlands

SESSION B: MICROBIOLOGY

Pulsed Microwaves for Non-Thermal Inactivation of SARS-CoV-2

Jesus Nain Camacho Hernandez¹, Felix Esslinger², Gregor Ebert²,

Guido Link¹

¹Karlsruhe Institute of Technology, Institute for Pulsed Power and Microwave Technology IHM, Eggenstein Leopoldshafen, Germany

²Helmholtz Munich, Institute of Virology VIRO, Neuherberg, Germany



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SCHEDULE OF EVENTS

Synergistic Microwave and TiO₂/Activated Carbon Catalysis for Enhanced *Bacillus subtilis* Inactivation

Chiva Sum, Yoshimitsu Masuda, Maamoun Ibrahim, Shuntaro Tsubaki, Noriyuki Igura
Kyushu University, Fukuoka, Japan

2:25pm - 2:50pm

COFFEE BREAK

2:50pm - 4:10pm

SPECIAL SESSION: SUSTAINABILITY

INVITED: Microwave Processing for Net Zero Applications

Gabriela Duran Jimenez

Advanced Materials Research Group, University of Nottingham

PANEL DISCUSSION

Moderated by John F. Gerling. Panelists: Naoki Shinohara, Gabriela Duran Jimenez

4:10pm - 5:00pm

IMPI ANNUAL BUSINESS MEETING

Open to all current and prospective IMPI members

Presentation of IMPI Fellow Award to Marie Jirsa, Voting Board Elections, Officer Reports, Award of the R.F. Schiffmann Memorial Scholarship

6:30pm - 9:00pm

GROUP DINNER AT LOCAL RESTAURANT

Registration Required – Additional Fee Applies

THURSDAY, JUNE 18, 2026

8:00am - 8:15am

ANNOUNCEMENTS

8:15am - 9:05am

KEYNOTE ADDRESS

The AI Shift: Deciphering and Preparing for Our AI-Powered Future

Michael Wolf

The Spoon, CES Food Tech and Smart Kitchen Summit

9:05am - 9:10am

FIVE MINUTE BREAK TO MOVE BETWEEN CONCURRENT SESSIONS



9:10am - 10:25am

CONCURRENT SESSIONS

SESSION A: FOOD TECHNOLOGIES II

Trends in Microwave Cooking: Wave-Based Food Processing: Eliminating the Need for Boilers and Jacketed Vessels

Lou A. Honary

WAVEtek Process Technology, LLC, Grundy Center, Iowa, USA

Impact of a Novel Air-Blowing System on the Mechanical Integrity of Sustainable Packaging During Microwave Heating

Alexandre Thillier¹, Ana Caroline Frabetti¹, Ben Ballart² and Mathéo Benas³

¹SAIREM, Décines-Charpieu, France

²SAIREM Corporation, Atlanta, USA

³CTCPA, Avignon, France

Microwave-Assisted 3D Food Printing of Emulsion Gel

Shuntaro Tsubaki¹, Ayane Ide¹, Daniel R. Slocombe², Oliver Castell², Ibrahim Maamoun¹ and Noriyuki Igura¹

¹Kyushu University, Fukuoka, Japan

²Cardiff University, Cardiff, UK

SESSION B: REACTORS & PYROLYSIS

Effect of Fluidization Regime and Particle Electrical Property on Microwave Penetration and Thermal Gradients in Fluidized Bed Reactors

Haoyang Li, Mehdi Salakhi, Luke Di Liddo and Murray J. Thomson

University of Toronto, Toronto, Canada

Monitoring of the Chemical Synthesis Process in a Microchemical Reactor via S11 Measurement

Ruth de los Reyes Cánovas¹, Eduard Palomares Sendra¹, José Vicente Ros Lis² and

Pablo Santón Pons³

¹Polytechnic University of Valencia, Valencia, Spain

²University of Valencia, Valencia, Spain

³pinkRF B.V., Nijmegen, Netherlands

Microwave Pyrolysis of Agricultural Biomass Residues

Candice Ellison and Charles A. Mullen

USDA-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA



10:25am - 10:45am

COFFEE BREAK

10:45am - 12:10pm

CONCURRENT SESSIONS

SESSION A: MICROWAVE DESIGN & TEST

Microwave Applicator for Rapid and Uniform Heating of High and Low Loss Solid Materials

John F. Gerling¹, Robert Weiss² and Alex Welsh²

¹Gerling Consulting, Inc., Gilroy, CA, USA

²Malachite Technologies, Inc., San Francisco, CA, USA

Arcing Mitigation in Microwave Heating of Fine-Pitch Cu RDLs Using a Field-Homogenizing Plate

Gwang-Mun Choi, Jungho Shin, Jiho Joo, Ki-Seok Jang, Jin-Hyuk Oh, Chanmi Lee,

Seok-Hwan Moon, Kwang-Seong Choi, Yong-Sung Eom

Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea

Industry Wide Evaluation of High-Power ISM Isolators

Jacob Sturgis

Microwave Techniques LLC, Gorham, United States

12:00pm - 12:40pm

NETWORKING LUNCHEON (Posters & Exhibits Open)

12:40pm - 1:40pm

POSTER & EXHIBITOR SESSION

1:40pm - 3:05pm

PLENARY SESSION: HIGH POWER & MATERIAL PRODUCTION

INVITED: Pushing the Limits of THz FEL Sources Using Tapering-Enhanced Superradiance

Leon Feigin¹, Avraham Gover², Amir Weinberg² and Ariel Nause¹

¹Ariel University, Ariel, Israel

²Tel Aviv University, Tel Aviv, Israel

High Power Phased Array Microwave Rock Pre-Conditioning at 2.45 GHz

Raphael Speck^{1,2}, and Hartmut Krause²

¹Herrenknecht AG, Schwanau, Germany

²TU Bergakademie Freiberg, Freiberg, Germany



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SCHEDULE OF EVENTS

THURSDAY, JUNE 18, 2026, CONTINUED

CARBOWAVE: Muegge Contribution to Carbon Fiber Production via Low Energy Microwave Absorption

Daniel Baars¹, Amandine Guissart¹, Hueseyin Ates², Markus Dingeldein¹ and Jürgen Uebbing¹

¹MUEGGE GmbH, Reichelsheim, Germany

²MUEGGE Gerling, Modesto, USA

3:05pm - 3:15pm

AWARDS & CLOSING REMARKS

3:15pm

SYMPOSIUM CONCLUDES



Naoki Shinohara

Professor, Kyoto University, Japan & IEEE MTT-S Elected AdCom Voting Member

Microwave Power Transfer for Sustainable Future

Microwaves can be applied not only for wireless communication but also for microwave heating and for wireless power transfer (WPT). The microwave power applications can contribute to the future sustainable society. There are common technologies for the microwave heating and the WPT, for example, high power and high efficiency microwave transmitter, low loss phase control system for advance, etc. In this talk, recent WPT R&D and commercial applications are introduced. In Kyoto University, we are developing a novel low loss and low cost phased array antenna at 28GHz for the WPT but also developing novel beam forming method to increase the beam efficiency. The developed technologies can be applied not only for the business but also for the future Space Based Solar Power (SBSP), for which there are various ongoing R&D project in Japan and in the world. There WPT applications also will be introduced.



Mike Wolf

Founder, The Spoon, SKS, SKS Japan, CES Food Tech, The Food AI Summit and Keynoter & Advisor on AI Evolution for F&B

The AI Shift: Deciphering and Preparing For our AI-Powered Food Future

In this keynote, Michael Wolf will explore how artificial intelligence is beginning to reshape the global food system—from the way food is developed and manufactured to how consumers cook, shop, and eat at home. Drawing on insights from his work covering food technology and the consumer kitchen, Wolf will unpack the real implications of the current AI wave: where the technology is already making an impact, where it may be overhyped, and what it means for companies, engineers, and professionals working across the food value chain. Rather than offering a purely technical view, the talk will take a practical look at both the opportunities and risks of the AI shift, highlighting emerging technologies, new business models, and the skills organizations and individuals will need to navigate an increasingly AI-powered food future.



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INVITED SPEAKERS



Xu Zhou

*Pennsylvania State University
University Park, PA, USA*



Gabriela Duran Jimenez

*University of Nottingham
Nottingham, United Kingdom*



Ariel Nause

*Ariel University
Ariel, Israel*



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SPECIAL THANKS

Special thanks to the IMPI 60 Technical Program Committee for their dedication to this Symposium:

Chairs

Jiajia Chen, University of Tennessee - Knoxville, USA, Chair

Pablo Santón, pinkRF, Netherlands, Vice-Chair

Members

Raymond Boxman, Tel Aviv University, Israel

Graham Brodie, James Cook University, Australia

Ralph W. Bruce, RW Bruce Associates, LLC, USA

José Manuel Catalá-Civera, Instituto ITACA, Universitat Politècnica de València, Spain

Zane Cohick, Air Force Research Laboratory, USA

Candice Ellison, USDA-ARS, USA

Ulrich Erle, IMPI Board of Governors, USA

John F. Gerling, Gerling Consulting, USA

B. Reeja Jayan, Carnegie Mellon University, USA

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Brent Leier, Defence Research and Development Canada, Canada

Pranjali Muley, National Energy Technology Laboratory, USA

Marzena Olszewska-Placha, QWED, Poland

Marilena Radoiu, Microwave Technologies Consulting, France

Robert Welton, Oak Ridge National Laboratory, USA

Klaus Werner, pinkRF B.V., Netherlands

Vadim Yakovlev, Worcester Polytechnic Institute, USA

Xu Zhou, Pennsylvania State University, USA



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REGISTRATION

Please mail this completed form with payment to:

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Or register online at www.IMPI.org

Name: _____

Title: _____

Company: _____

Address: _____

City: _____ State/Prov.: _____ Postal Code: _____

Country: _____ Phone: _____ Email: _____

SYMPOSIUM (Circle one)

	REGISTRATION FEES
Professional/Corporate IMPI Member	\$825
Professional Non-Member	\$925
Student IMPI Member	\$625
Student Non-Member	\$725

Registration Fee Includes: Attendance at all in-person sessions from 4:45pm on Tuesday, June 16th – Thursday, June 18th, Welcome Reception/Exhibitor Showcase, two continental breakfasts, three coffee breaks, two networking luncheons, exhibition hall access, online access to the conference Proceedings.

ADD-ONS (Optional)

- ☐ **SHORT COURSE I: MICROWAVE & RF SAFETY CLASS** - \$275 USD IMPI Member/\$325 USD Non-Member
- ☐ **SHORT COURSE II: MICROWAVE PROCESSING FOR THE FUTURE OF FOOD: SCIENCE, INDUSTRY & INNOVATION** - \$275 USD IMPI Member/\$325 USD Non-Member
- ☐ **SOLID STATE RF ENERGY HOSTED LUNCHEON:** \$50 USD
- ☐ **GROUP DINNER AT LOCAL RESTAURANT:** \$70 USD

MEMBERSHIP

Not a member? Join IMPI now and save significantly on registration:

- ☐ **Professional Membership:** \$225
- ☐ **Student Membership (Valid Student ID required):** \$50
- ☐ **Corporate Membership:** \$2,500

PAYMENT

- ☐ **Check enclosed (Make check payable to IMPI)**
- ☐ **Credit card payment:** ☐ Visa ☐ Mastercard
☐ Discover ☐ AMEX

Registration fee: \$ _____

Add-ons: \$ _____

Membership fee: \$ _____

TOTAL DUE: \$ _____

Charge amount: \$ _____

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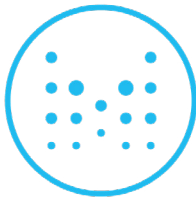
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Questions or Comments?
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